

**AMENDMENTS TO THE SPECIFICATION:**

*Please amend the caption on page 1, line 9, as follows:*

**BACKGROUND OF THE INVENTION**

*Please amend the caption on page 3, line 6, as follows:*

**SUMMARY OF THE INVENTION**

*Please amend the paragraphs beginning at page 3, line 10, and continuing to page 4, line 5, as follows:*

It is an object of the present ~~invention~~ technology to provide a solar cell unit and a method for mounting the solar cell unit on an oblique roof, which ensure that, when a plurality of such solar cell units are mounted on the oblique roof, rainwater intruding into gaps defined between the adjacent solar cell units and gaps defined between the solar cell units and roof tiles disposed adjacent the units can be drained to be prevented from reaching a base surface of the roof.

It is another object of the present ~~technology~~ invention to provide a solar cell unit and a method for mounting the solar cell unit on an oblique roof, which ensure that a plurality of such solar cell units can easily be mounted on the oblique roof without an influence of a dimensional difference between the size of an installation region and the total size of the solar cell units arranged on the installation region.

According to the present ~~technology~~ invention, there is provided a solar cell unit, which comprises: a solar cell module; a module frame

provided around the solar cell module as supporting the solar cell module for mounting the solar cell unit on an oblique roof; and a drain channel provided along an edge of the module frame outside the module frame.

*Please amend the paragraph beginning at page 4, line 25, and continuing to page 5, line 2, as follows:*

Fig. 1 is a perspective view schematically illustrating the overall construction of a solar cell unit according to an example embodiment of the present invention;

*Please amend the paragraphs beginning at page 5, line 16, and continuing to page 6, line 24, as follows:*

A solar cell unit according to the present ~~invention technology~~ comprises: a solar cell module; a module frame provided around the solar cell module as supporting the solar cell module for mounting the solar cell unit on an oblique roof; and a drain channel provided along an edge of the module frame outside the module frame.

~~In the inventive solar cell unit, the s~~"Solar cell module" herein means a planar module including a plurality of solar cells arranged in a plane and electrically connected to one another.

~~In the inventive solar cell unit, t~~The solar cell module may have a rectangular shape. The module frame may include two horizontal frame portions provided parallel to each other to be disposed on the side of a roof ridge and on the side of an eave, respectively, when the solar cell

unit is mounted on the oblique roof, and a first side frame portion and a second side frame portion respectively extending from opposite ends of one of the horizontal frame portions to opposite ends of the other horizontal frame portion. The drain channel may be provided along an outer side of the first side frame portion. With this arrangement, where a plurality of such solar cell units are arranged parallel to the roof ridge or the eave on the oblique roof with the first side frame portion of one of two adjacent solar cell units and the second side frame portion of the other solar cell unit being disposed in opposed relation, rainwater intruding into a gap defined between the first side frame portion of the one unit and the second side frame portion of the other unit can be received by the drain channel provided along the first side frame portion of the one unit.

~~In the inventive solar cell unit, the~~ The drain channel may have a rib projecting upward from a bottom of the drain channel and extending longitudinally of the drain channel. With this arrangement, a flow channel of the rainwater flowing through the drain channel is restricted by the rib, so that the flow amount and flow rate of the rainwater can properly be maintained according to the amount of the rainwater flowing into the drain channel.

*Please amend the paragraphs beginning at page 7, line 13, and continuing to page 11, line 6, as follows:*

~~In the inventive solar cell unit, the~~ The drain channel may have a barrier plate which closes one end of the drain channel located on the side of the roof ridge. With this arrangement, where the rainwater flows back in a direction opposite from the inclination of the roof in the drain

channel for a certain reason, for example, due to a strong wind blowing toward the roof ridge from the eave of the oblique roof, the rainwater thus flowing back can be blocked by the barrier plate. As a result, the rainwater flowing in the drain channel is prevented from being leaked from the ridge-side end of the drain channel from which the rainwater is not normally drained. Thus, the rainwater is prevented from wetting a base surface of the roof.

~~In the inventive solar cell unit,~~ The drain channel may include a channel bottom and opposite side walls. The second side frame portion may have a planar projection projecting horizontally outward from the entire upper edge of the second side frame portion. The projection may be located at a higher level than the side walls of the drain channel. With this arrangement, where a plurality of such solar cell units are arranged parallel to the roof ridge or the eave on the oblique roof with the first side frame portion of one of two adjacent units and the second side frame portion of the other unit being disposed in opposed relation, the projection of the other unit overhangs the drain channel of the one unit. Thus, an unnecessarily great amount of rainwater is prevented from flowing into the drain channel through the gap defined between the first side frame portion and the second side frame portion.

~~In the inventive solar cell unit,~~ The drain channel and the projection may each have a predetermined width. The width of the drain channel may be greater than the width of the projection. With this arrangement, where a plurality of such solar cell units are arranged parallel to the roof ridge or the eave on the oblique roof with the first side frame portion of one of two adjacent units and the second side frame portion of the other unit being disposed in opposed relation, the drain

channel of the one unit is partly covered with the projection of the other unit, and the gap is defined between the first side frame portion of the one unit and the second side frame portion of the other unit. Thus, an unnecessarily great amount of rainwater is prevented from flowing into the drain channel through the gap defined between the first side frame portion and the second side frame portion, and a dimensional difference between the size of the installation region and the total size of the solar cell units can flexibly be accommodated by properly adjusting the width of the gap (clearance) when the solar cell units are mounted on the roof.

~~In the inventive solar cell unit, the~~ The projection may have a rib projecting downward from a rear surface of the projection and extending along the second side frame portion for dripping rainwater flowing along the rear surface of the projection. With this arrangement, the rainwater flowing from a front surface to a rear surface of the second side frame portion is blocked to be dripped downward by the rib. Thus, rainwater falling on the solar cell units is prevented from intruding into the rear side of the solar cell units from the front surface of the second side frame portion. Particularly where a plurality of such solar cell units are arranged parallel to the roof ridge or the eave on the oblique roof with the first side frame portion of one of two adjacent units and the second side frame portion of the other unit being disposed in opposed relation, the rainwater dripping along the rib is received by the drain channel of the solar cell unit thereby to be prevented from wetting the base surface of the roof.

~~In the inventive solar cell unit, the~~ The first side frame portion may further have an auxiliary drain channel projecting under the module and extending along an inner side of the first side frame portion. With this

arrangement, rainwater intruding into the rear side of the solar cell unit for a certain reason can be received by the auxiliary drain channel.

~~In the inventive solar cell unit,~~ The first side frame portion may further have a planar auxiliary projection projecting horizontally outward from the entire upper edge of the first side frame portion. With this arrangement, the auxiliary projection is located above the drain channel, so that an unnecessarily great amount of rainwater is prevented from flowing into the drain channel. Particularly where a plurality of such solar cell units are arranged parallel to the roof ridge or the eave on the oblique roof with the first side frame portion of one of two adjacent units and the second side frame portion of the other unit being disposed in opposed relation, the auxiliary projection of the one unit and the projection of the other unit are disposed in opposed spaced relation above the drain channel, thereby minimizing the amount of the rainwater flowing into the drain channel.

According to another aspect of the present ~~invention~~ technology, there is provided a method for mounting a plurality of solar cell units on an oblique roof, the solar cell units each comprising a rectangular solar cell module, a module frame having two horizontal frame portions and first and second side frame portions, and a drain channel provided along the first side frame portion as described above, the method comprising the step of mounting the solar cell units parallel to a roof ridge or an eave on the oblique roof so that the first side frame portion of one of two adjacent solar cell units and the second frame portion of the other solar cell unit are opposed to each other with a gap being defined therebetween and the drain channel provided along the first side frame portion of the one unit is located below the gap.

*Please amend the paragraph beginning at page 11, line 15, and continuing to page 12, line 10, as follows:*

According to further another aspect of the present invention technology, there is provided a method for mounting a solar cell unit on a partly tile-covered oblique roof, the solar cell unit comprising a rectangular solar cell module, a module frame having two horizontal frame portions and first and second side frame portions, and a drain channel provided along the first side frame portion as described above, the method comprising the steps of: providing a rectangular installation region on the oblique roof, the rectangular installation region having two horizontal edges parallel to a roof ridge or an eave and two side edges respectively extending from opposite ends of one of the horizontal edges to opposite ends of the other horizontal edge; and mounting the unit on the installation region so that the first side frame portion of the unit is opposed to one of the side edges of the installation region to provide a gap between the first side frame portion and the one side edge and the drain channel provided along the first side frame portion is located below the gap; wherein the side edges of the installation region are each defined by a side edge of a roof tile; wherein the gap providing step comprises the step of providing the gap between the first side frame portion and the side edge of the roof tile.

*Please amend the paragraph beginning at page 12, line 19, and continuing to page 13, line 16, as follows:*

According to still another aspect of the present invention technology, there is provided a method for mounting a solar cell unit on a partly tile-covered oblique roof, the solar cell unit comprising a rectangular solar cell module, a module frame having two horizontal frame portions and first and second side frame portions, and a drain channel provided along the first side frame portion as described above, the method comprising the steps of: providing a rectangular installation region on the oblique roof, the rectangular installation region having two horizontal edges parallel to a roof ridge or an eave and two side edges respectively extending from opposite ends of one of the horizontal edges to opposite ends of the other horizontal edge; and mounting the unit in the installation region so that the second side frame portion of the unit is opposed to one of the side edges of the installation region to provide a gap between the second side frame portion and the one side edge; wherein the one side edge of the installation region is defined by a side edge of a roof tile; wherein the side edge of the roof tile opposed to the second side frame portion has an underlap portion projecting horizontally outward from a lower portion of the side edge; wherein the gap providing step comprises the step of providing the gap between the second side frame portion and the side edge of the roof tile so that the underlap portion of the roof tile is located below the gap.

*Please amend the paragraphs beginning at page 14, line 1, and continuing to page 14, line 17, as follows:*

With reference to the attached drawings, the present invention technology will hereinafter be described in detail by way of an embodiment thereof.



Embodiment

A solar cell unit according to ~~the-an example~~ embodiment of the present invention will be described in detail with reference to Figs. 1 to 5. Fig. 1 is a perspective view schematically illustrating the overall construction of a solar cell unit according to this embodiment. Fig. 2 is a perspective view schematically illustrating a plurality of solar cell units of Fig. 1 mounted on an installation region of an oblique roof. Fig. 3 is an explanatory diagram illustrating a portion A of Fig. 2 as seen parallel to a surface of the roof from the side of an eave. Fig. 4 is an explanatory diagram illustrating a portion B of Fig. 2 as seen parallel to the surface of the roof from the side of the eave. Fig. 5 is an explanatory diagram illustrating a portion C of Fig. 2 as seen parallel to the surface of the roof from the side of the eave.

*Please amend the paragraph beginning at page 16, line 7, and continuing to page 16, line 17, as follows:*

As shown in Fig. 1, the projection 11 has a drip rib 12 projecting downward from a rear surface thereof and extending along the second side frame portion 7 for dripping rainwater flowing along the rear surface thereof. In this embodiment, the drip rib 12 is not necessarily required to have a great height, but has a moderate height. If the height of the drip rib 12 is too great, there is a possibility that, when the solar cell unit 1 is disposed adjacent a roof tile 103b as will be described later (see Fig. 5), the solar cell unit 1 cannot flexibly be installed on the roof with the drip rib 12 in abutment against an underlap portion 107 of the roof tile 103b. A degree of downward extent of the drain trough-defining rib and a degree of upward extent of the drip rib facilitates adjustable positioning

of the solar cell unit in the lateral direction without interference with a drip rib or drain trough-defining rib of an adjacent solar cell unit.

*Please amend the paragraph beginning at page 19, line 8, and continuing to page 19, line 13, as follows:*

Further, even if there is a dimensional difference between the size of the installation region provided by removing the roof tiles 103 from the tile-covered oblique roof 100 and the total size of the solar cell units 1 arranged on the roof, the dimensional difference can flexibly be accommodated for easy installation of the solar cell units by properly adjusting the width of the gap. That is, the width of the gaps between adjacent solar cell unit is adjustable.

*Please amend the paragraph beginning at page 23, line 12, and continuing to page 23, line 20, as follows:*

According to the present ~~invention~~technology, the solar cell units each include the drain channel provided along the edge of the module frame outside the module frame. Therefore, when the solar cell units are mounted on the oblique roof, the rainwater intruding into the gaps defined between the module frames of the respective units can be received by the drain channels of the units and guided toward the eave of the oblique roof thereby to be drained. This makes it possible to prevent the corrosion of the base surface of the roof.